



**EMCON**

8021 Phillips Highway • Suite 12 • Jacksonville, Florida 32256-7460 • (904) 636-9360 • Fax (904) 636-9356

February 9, 1996  
Project 71355 020.010

Mary C. Nogas, P.E.  
Florida Department of Environmental Protection  
Northeast District  
7825 Baymeadows Way, Suite B200  
Jacksonville, Florida 32256-7590

Re: Contamination Assessment Report Addendum  
Brown's Dump Site, Mary McLeod Bethune Elementary School  
Duval County - Solid Waste

Dear Ms. Nogas:

EMCON received the Florida Department of Environmental Protection (FDEP) December 18, 1995 letter regarding the Contamination Assessment Report (CAR) at the site referenced above (Attachment A). The Department requested that additional work be performed prior to approving the CAR. We have addressed each of your comments in this CAR Addendum. We have listed the FDEP comments in italics, followed by our response.

**Comment No. 1:** *The investigation included a determination and mapping of existing soil cover over the ash residue. Significant areas of uncovered ash residue were found onsite, including areas where access is not restricted. At a minimum, interim measures need to be taken to eliminate exposure routes in those uncovered areas identified on Figure 11; in particular, those areas around the school buildings and those on the accessible playground.*

**Response No. 1:** A meeting between the FDEP, Duval County Public Schools, City of Jacksonville Solid Waste Division, and EMCON representatives, was held December 19, 1995. The meeting was conducted to discuss interim remedial measures at the Mary McLeod Bethune Elementary School portion of the Brown's Dump site. The FDEP had special concerns about areas around the school buildings and in the accessible playground areas. The Duval County Public Schools, the Solid Waste Division and FDEP agreed on interim remedial measures. The interim measures were conducted in two phases.

The first phase consisted of placing approximately six inches of soil cover over the surface in areas around the basketball court and playground area. It also included the placement of a soil cover over the egress point along the western property line near the Bessie Circle Apartments and the western entrance to the courtyard between the southern two school buildings. After the soil was placed, four hundred pounds of bahia and rye seed were spread over the soil. Splash guards were placed at the bottom of each downspout that drains to the playground area. Phase one also included the repair of the fence along the western property line where it had been cut for access



to the school property. Phase one interim measures were completed on December 22, 1995. Figure 1 shows the phase one interim measures.

The second phase of the interim measures was concerned with the front parking area and the southeast corner of the property. Originally, a temporary parking lot consisting of approximately 6 inches of limerock was proposed to cover the existing parking area. However, the Duval County Public Schools recommended installing a fence around the entire front of the property to control pedestrian access during school hours and when school is not in session. Phase two interim measures consisted of installing a 6-foot high chain link fence with three rolling gates and one swinging gate along the front of the school and the southeast corner of the school property. The fence was installed by a licensed fence contractor. The installation of the fence was started on January 22, 1996 and finished January 26, 1996.

The drill cuttings that contained ash from the auger borings that were drilled to set the fence posts were collected and containerized in 55-gallon drums for disposal. The new fence was installed from the existing fence along 33rd Street, east to Pearce Street, then north along Pearce Street, inside the school's property line, to the southeast corner of the JEA property. As part of the second phase, the existing pedestrian egress point along the access road south of the southern most school building was widened by installing a 4-foot locking gate. A second 4-foot locking gate was installed just west of the access road along 33rd Street. The two 4-foot locking gates were installed on February 5 and 6, 1996. Figure 2 shows the location of the new fence and gates.

**Comment No. 2:** *The report indicates that significantly more ash residue is exposed in the areas not under access restriction than was originally expected. Review of the report indicates some samples had elevated levels, but that none of the samples collected for laboratory analysis were located in the area adjacent to the buildings. Please propose additional borings for the collection of soil and ash samples for laboratory analysis in the areas adjacent to the buildings and also in those areas in the accessible playground.*

**Response No. 2:** Samples collected from within the ash, but not analyzed during the contamination assessment, were held at Southeastern Environmental Laboratories. Thirteen additional ash samples collected from borings SB-1, SB-2, SB-4, SB-5, SB-14, SB-18, SB-24, SB-25, SB-45, SB-50, SB-56, SB-58, and SB-59 were analyzed for total lead on December 27, 1995. The ash samples were collected from depths ranging from just below land surface to approximately 1 foot below land surface. The additional ash samples were collected from within the courtyards, in the front of the school building, and from along the southwestern and western property lines.

Figure 3 shows the location of the samples analyzed for total lead concentrations. The chemical analyses are presented in Attachment B.

Five samples were analyzed from the front of the school (SB-2W, SB-4W, SB-5W, SB-14W, and SB-18W) that detected lead concentrations above 500 mg/Kg. Sample SB-1W detected concentrations below 500 mg/Kg. Samples from boring SB-24 and SB-25 were collected from within the courtyards. Sample SB-24W had lead concentrations above 500 mg/Kg; however, SB-25W did not. Samples collected and analyzed from the west-central portion of the site (SB-45W and SB-59W) reported lead concentrations above 500 mg/Kg. Samples collected and analyzed from the southwest corner of the property (SB-50W, SB-56W, and SB-58W) detected lead concentrations below 500 mg/Kg. Soil samples collected from below the ash were not analyzed because results from the previous analyses of samples collected below the ash did not indicate lead concentrations above 500 mg/Kg.

Additional auger borings, SB-65 through SB-141, were drilled on December 20, 21 and 22, 1995 to delineate the extent of the ash in the area of the existing parking lot, southeast corner of the property, the playground and basketball area, west of the playground, and south of the southern school building. Figure 4 shows the location of the additional soil borings and the depth to ash detected in each boring. Borings in the area of the playground, west of the playground, and south of the school building did not encounter ash. Borings drilled in the front parking lot and in the southeast corner of the property detected ash.

Borings were drilled to a depth of approximately two feet below land surface using a portable power auger during the installation of the fence posts along 33rd Street and Pearce Street. Borings were drilled on 10-foot spacings. Ash was not encountered in the borings along 33rd Street or along Pearce Street between 33rd Street and 34th Street. Figure 5 shows the locations of the borings installed for the fence posts. Ash was detected in several of the borings east of the parking area between the two entrance roads in front of the school and also approximately 20 ft north of the northern entrance road. Ash was not encountered in the borings along the northeast property line until the northern most borings just south of the Jacksonville Electric Authority property. The fence line along the southeast corner of the property and along sections of the northeast property line define the extent of the ash in these areas.

**Comment No. 3:** *The groundwater data collected indicates that impact to groundwater beneath and within the ash is minimal. Resampling of the assessment wells indicated that only one well, MW-5, had an exceedance of the groundwater standard of 0.015 mg/L. This concentration was 0.031 mg/L. Based on this information, the wells need to be maintained and some additional sampling may be required, but significant groundwater impact does not appear to have occurred.*

**Response No 3:** The eight groundwater monitoring wells will be maintained for monitoring, and retested later this year.

**Comment No. 4:** *The soil and ash analytical data indicate that the ash material itself is the primary source and location of the metals contamination; in particular, the ash is the location of the lead.*

**Response No. 4:** Elevated concentrations of lead have only been detected within the ash material. Analyses of soil samples above and below the ash have not detected concentrations of lead above 500 mg/Kg except for one sample.

**Comment No. 5:** *The data presented appears to demonstrate that the ash disposal area is not limited to the property owned and controlled by the Duval County School Board.*

**Response No. 5:** EMCON has been contracted by the City of Jacksonville Solid Waste Department to define the lateral extent of the ash. We are in the process of obtaining off-site property owners' access agreements. We have obtained right-of-way access agreements from the City of Jacksonville. We have installed over 200 off-site borings to delineate the lateral extent of the ash. The borings were drilled using a stainless steel hand auger to depths ranging from 6 inches to 3 feet below land surface. Ash was detected in the borings west of the school property in the Bessie Circle subdivision north of 33rd Street to Moncrief Creek. Ash was also detected south of 33rd Street along Connie and Etta Streets south to 31st Street. Isolated boreholes encountered ash along 30th Street. Ash was encountered along Spires Avenue south of 33rd Street to the intersection of 31st Street. Ash was detected north of Moncrief Creek between the railroad track and the creek. Ash was detected northeast of the JEA property along the right-of-way. Ash was also detected northeast of the JEA property north of the railroad tracks and south of Moncrief Creek.

**Comment No. 6:** *The data presented makes no reference to a clay layer observed during initial site activities. It was proposed that the clay layer be mapped and it be determined if a perched groundwater layer was discontinuous. Please provide a discussion of this point.*

**Response No. 6:** A discontinuous clay layer was found at depths ranging from 2 to 11 feet below land surface. It had a maximum thickness of 6 feet. The clay was not continuous across the site and could not be accurately mapped. A perched groundwater layer was not observed during the installation of the soil borings or monitoring wells, and is not probable, based on the discontinuous nature of the clay encountered.

**Comment No. 7:** *A physical cap or cover may be an appropriate remedial action to address exposure routes, but more details need to be provided and more data is needed in the area of the school buildings. Concurrently with developing the additional sampling plan, please provide those details. Also, please recognize that some type of permanent notification, through deed restriction or other mechanism, will have to be developed.*

Mary C. Nogas, P.E.  
February 9, 1996  
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Project 71355.020.010

**Response No. 7:** If a cap or cover is appropriate, detailed construction drawings will be prepared and submitted to FDEP for approval.

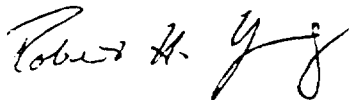
Based on the extent of the ash defined by the most recent hand auger borings, the area south of a line connecting the northern edge of the southern school building across the northern edge of the playground to the fence at the western property line (Figure 4) should not require a cover because ash has not been detected in this area except for one sample in boring SB-50. Soil boring SB-50, located near the southwest corner of the property along 33rd Street, contained five feet of ash; however, the laboratory analysis of lead indicated a concentration of 354 mg/Kg. Subsequent borings in this area did not detect ash. The area north of the playground and southernmost school buildings, in front of the school, and in the two courtyards may require appropriate remedial action.

Notification, in accordance with the City Ordinance Code, will be developed by the City of Jacksonville.

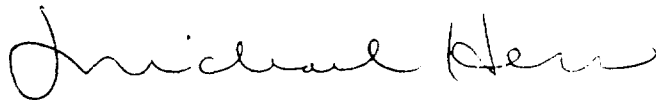
Please call if you have questions.

Sincerely,

EMCON



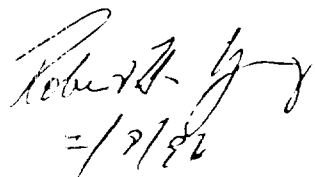
Robert H. Young, P.G.  
Senior Hydrogeologist



Michael J. Hess, P.E.  
Director, Environmental Services

Attachments: Figures  
Attachments

cc: Bruce Ackerman  
Lary Perkins  
Greg Radlinski  
Matt McClure



**ATTACHMENT A**



# Department of Environmental Protection

Lawton Chiles  
Governor

Northeast District  
7825 Baymeadows Way, Suite B200  
Jacksonville, Florida 32256-7590

Virginia B. Wetherell  
Secretary

December 18, 1995

## CERTIFIED - RETURN RECEIPT

Mr. Robert H. Young, P. G.  
EMCON  
8021 Philips Highway, Suite 12  
Jacksonville, Florida 32256-7460

Dear Mr. Young:

Review of the Contamination Assessment Report (CAR)  
Brown's Dump Site  
Mary McLeod Bethune Elementary School  
Duval County - Solid Waste

The Department has completed the review of the Contamination Assessment Report for the portion of the subject site owned by the the Duval County School Board and Jacksonville Electric Authority.

As outlined below, additional work needs to be performed before the Department can approve the CAR:

- 1) The investigation included a determination and mapping of existing soil cover over the ash residue. Significant areas of uncovered ash residue were found on site, including areas where access is not restricted. At a minimum, interim measures need to be taken to eliminate exposure routes in those uncovered areas identified on Figure 11; in particular, those areas around the school buildings and those on the accessible playground.
- 2) The report indicates that significantly more ash residue is exposed in the areas not under access restriction than was originally expected. Review of the report indicates some samples had elevated levels, but that none of the samples collected for laboratory analysis were located in the area adjacent to the buildings. Please propose additional borings for the collection of soil and ash samples for laboratory analysis in the areas adjacent to the buildings and also in those areas in the accessible playground.  
  
Please provide a series of soil boring maps showing analytical results of the sampling above, within and below the ash residue.
- 3) The groundwater data collected indicates that impact to groundwater beneath and within the ash is minimal. Resampling of the assessment wells indicated that only one well, MW-5, had an exceedance of the groundwater standard of 0.015 mg/l. This concentration was 0.031 mg/l. Based on this information, the wells need to be maintained and some additional sampling may be required, but significant groundwater impact does not appear to have occurred.

*"Protect, Conserve and Manage Florida's Environment and Natural Resources"*

Mr. Robert H. Young  
December 18, 1995  
Page two

- 4) The soil and ash analytical data indicate that the ash material itself is the primary source and location of the metals contamination; in particular, the ash is the location of the lead.
- 5) The data presented appears to demonstrate that the ash disposal area is not limited to the property owned and controlled by the Duval County School Board.
- 6) The data presented makes no reference to a clay layer observed during initial site activities. It was proposed that the clay layer be mapped and it be determined if a perched groundwater layer was discontinuous. Please provide a discussion of this point.
- 7) A physical cap or cover may be an appropriate remedial action to address exposure routes, but more details need to be provided and more data is needed in the area of the school buildings. Concurrently with developing the additional sampling plan, please provide these details. Also, please recognize that some type of permanent notification, through deed restriction or other mechanism, will have to be developed.

If you have any questions concerning this matter, please contact me at (904) 448-4320 extension 355.

Sincerely,

*MARY C. NOGAS*

FOR Mary C. Nogas, P. E.  
Solid Waste Supervisor

MCN:nn *My*

cc: Bruce R. Ackerman, Duval County School Board  
Lary L. Perkins, City Solid Waste Division  
Richard M. Breitmoser, P. E., Jacksonville Electric Authority



**ATTACHMENT B**

Southeastern Environmental  
Laboratories, Inc.  
80 Industrial Loop North, Building 5  
Orange Park, FL 32073  
(904) 269-6176

DHRS # 82315

DHRS E-82179

CQAP #8806330

DEPARTMENT OF PUBLIC UTILITIES  
SOLID WASTE DIVISION  
515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
ATTN: LARY PERKINS

SAMPLED BY: CLIENT  
CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: MARY MCLEOD BETHUNE ELEM SCHL  
SUBMISSION NUMBER: 9512000172  
REPORTED DATE: 01/02/96  
INVOICE NUMBER: 0

DESCRIPTION	SAMPLE ID						
=====							
SB - 14W							
=====							
SAMPLE DATE: 07/31/95							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	52621	667	MG/KG	7420	LC	1000	12/28/95

DESCRIPTION	SAMPLE ID						
=====							
SB - 18W							
=====							
SAMPLE DATE: 07/31/95							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	52622	657	MG/KG	7420	LC	1000	12/28/95

DESCRIPTION	SAMPLE ID						
=====							
SB - 1W							
=====							
SAMPLE DATE: 07/31/95							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	52617	2.49	MG/KG	7420	LC	1000	12/28/95

DHRS # 82315

Southeastern Environmental  
Laboratories, Inc.  
80 Industrial Loop North, Building 5  
Orange Park, FL 32073  
(904) 269-6176

DHRS E-82179

CQAP #880633G

DEPARTMENT OF PUBLIC UTILITIES  
SOLID WASTE DIVISION  
515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
ATTN: LARY PERKINS

SAMPLED BY: CLIENT  
CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: MARY MCLEOD BETHUNE ELEM SCHL  
SUBMISSION NUMBER: 9512000172  
REPORTED DATE: 01/02/96  
INVOICE NUMBER: 0

DESCRIPTION	SAMPLE ID						
=====							
SB - 24W							
=====							
SAMPLE DATE: 07/31/95							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	52623	2540	MG/KG	7420	LC	1000	12/28/95

DESCRIPTION	SAMPLE ID						
=====							
SB - 25W							
=====							
SAMPLE DATE: 07/31/95							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	52624	220	MG/KG	7420	LC	1000	12/28/95

DESCRIPTION	SAMPLE ID						
=====							
SB - 2W							
=====							
SAMPLE DATE: 07/31/95							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	52618	1020	MG/KG	7420	LC	1000	12/28/95

DHRS # 82315

Southeastern Environmental  
Laboratories, Inc.  
80 Industrial Loop North, Building 5  
Orange Park, FL 32073  
(904) 269-6176

DHRS E-82179

CQAP #880633G

DEPARTMENT OF PUBLIC UTILITIES  
SOLID WASTE DIVISION  
515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
ATTN: LARY PERKINS

SAMPLED BY: CLIENT  
CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: MARY MCLEOD BETHUNE ELEM SCHL  
SUBMISSION NUMBER: 9512000172  
REPORTED DATE: 01/02/96  
INVOICE NUMBER: 0

## DESCRIPTION

## SAMPLE ID

SB - 45W

SAMPLE DATE: 07/31/95

PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	52625	909	MG/KG	7420	LC	1000	12/28/

## DESCRIPTION

## SAMPLE ID

SB - 4W

SAMPLE DATE: 07/31/95

PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	52619	2200	MG/KG	7420	LC	1000	12/28/

## DESCRIPTION

## SAMPLE ID

SB - 50W

SAMPLE DATE: 07/31/95

PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	52626	354	MG/KG	7420	LC	1000	12/28

DHRS # 82315

**Southeastern Environmental  
Laboratories, Inc.**  
80 Industrial Loop North, Building 5  
Orange Park, FL 32073  
(904) 289-6176

DHRS E-82179

CQAP #880633G

DEPARTMENT OF PUBLIC UTILITIES  
SOLID WASTE DIVISION  
515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
ATTN: LARY PERKINS

SAMPLED BY: CLIENT  
CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: MARY MCLEOD BETHUNE ELEM SCHL  
SUBMISSION NUMBER: 9512000172  
REPORTED DATE: 01/02/96  
INVOICE NUMBER: 0

## DESCRIPTION

## SAMPLE ID

SB - 56W

SAMPLE DATE: 07/31/95

PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	52627	104	MG/KG	7420	LC	1000	12/28/9

## DESCRIPTION

## SAMPLE ID

SB - 58W

SAMPLE DATE: 07/31/95

PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	52628	480	MG/KG	7420	LC	1000	12/28/9

## DESCRIPTION

## SAMPLE ID

SB - 59W

SAMPLE DATE: 07/31/95

PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	52629	1800	MG/KG	7420	LC	1000	12/28/9

DHRS # 82318

Southeastern Environmental  
Laboratories, Inc.  
80 Industrial Loop North, Building 5  
Orange Park, FL 32073  
(904) 269-6176

DHRS E-82179

CQAP #880633G

DEPARTMENT OF PUBLIC UTILITIES  
SOLID WASTE DIVISION  
515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
ATTN: LARY PERKINS

SAMPLED BY: CLIENT  
CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: MARY MCLEOD BETHUNE ELEM SCHL  
SUBMISSION NUMBER: 9512000172  
REPORTED DATE: 01/02/96  
INVOICE NUMBER: 0

## DESCRIPTION

## SAMPLE ID

SB - 5W

SAMPLE DATE: 07/31/95

PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	52620	9110	MG/KG	7420	LC	1000	12/28/9

DHRS # 82315

Southeastern Environmental  
Laboratories, Inc.  
80 Industrial Loop North, Building 5  
Orange Park, FL 32073  
(804) 269-6176

DHRS E-82179

SOUTHEASTERN ENVIRONMENTAL LABORATORIES, INC.  
SUBMISSION RECEIVAL FORM

SUBMISSION #: 9512000172  
DATE RECEIVED: 12/21/95  
CLIENT NAME: DEPARTMENT OF PUBLIC UTILITIES

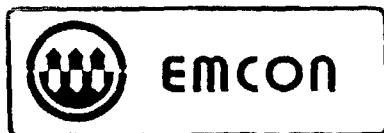
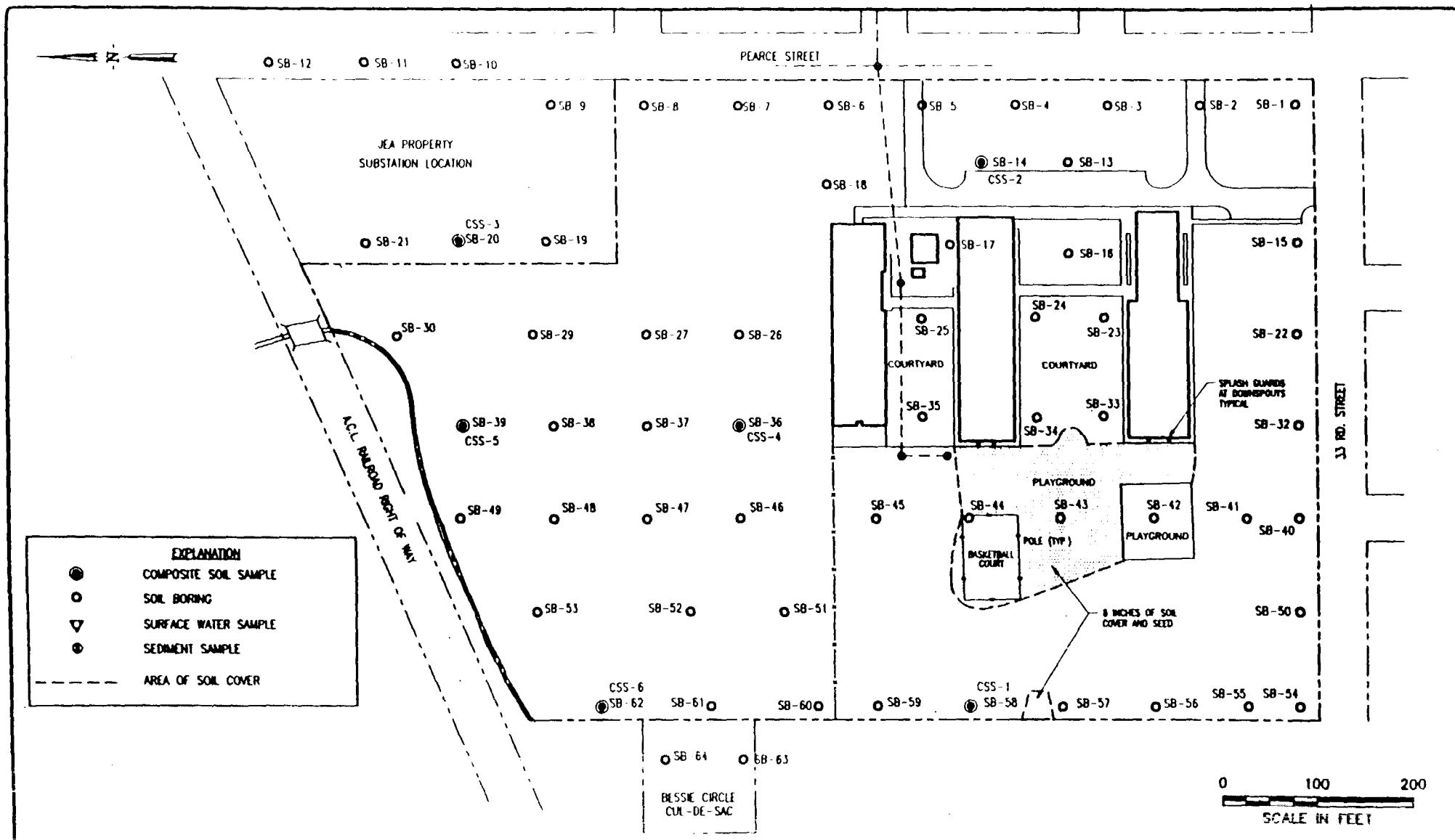
ORDER #	FIELD ID	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME
52617		SB - 1W	07/31/95	
52618		SB - 2W	07/31/95	
52619		SB - 4W	07/31/95	
52620		SB - 5W	07/31/95	
52621		SB - 14W	07/31/95	
52622		SB - 18W	07/31/95	
52623		SB - 24W	07/31/95	
52624		SB - 25W	07/31/95	
52625		SB - 45W	07/31/95	
52626		SB - 50W	07/31/95	
52627		SB - 56W	07/31/95	
52628		SB - 58W	07/31/95	
52629		SB - 59W	07/31/95	

Approved By:   
Pamela L. Rivers  
Laboratory Manager

## FIGURES

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NO.	DATE	DESCRIPTION	BY	CHKD BY	APP'D BY

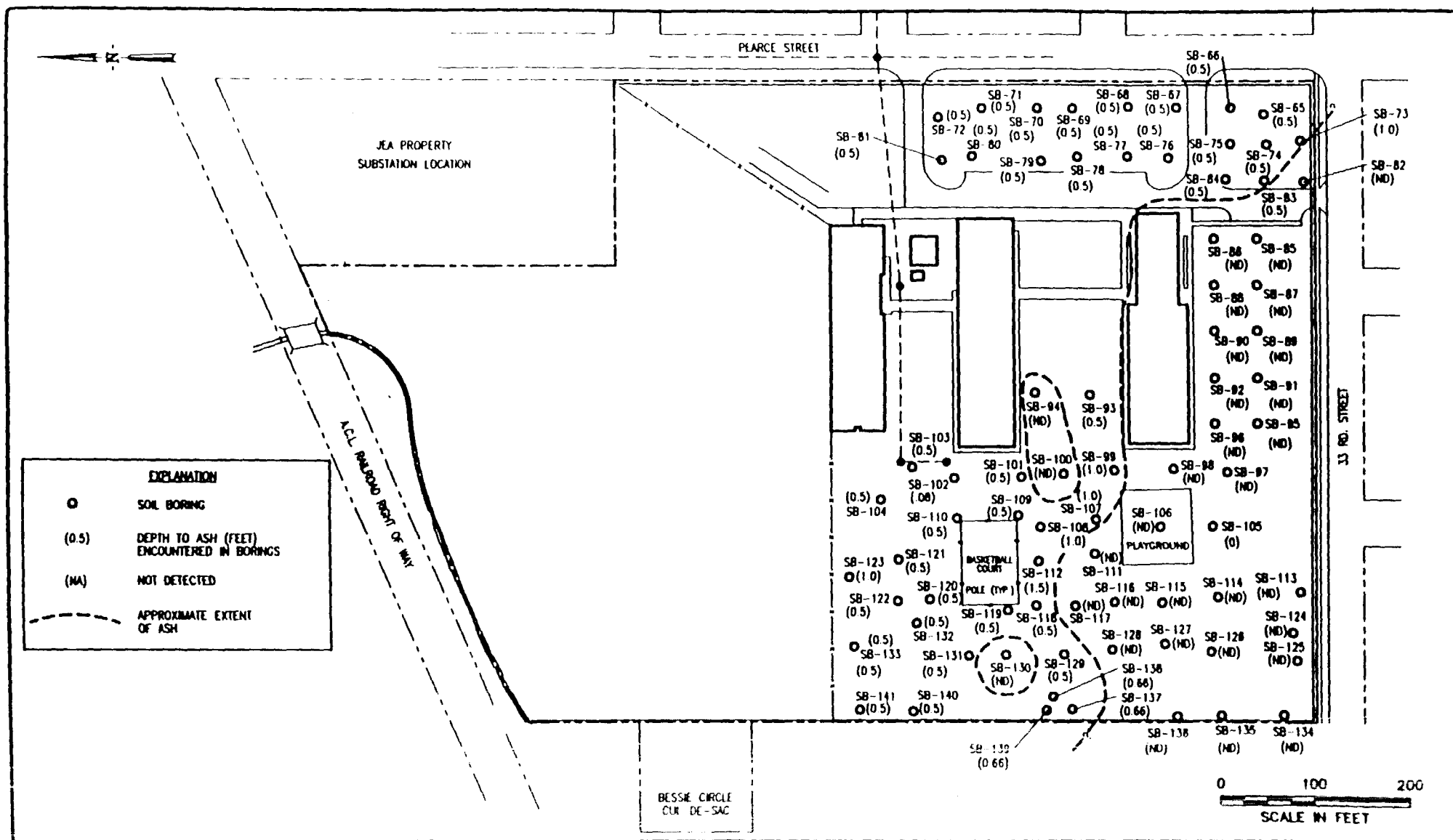
MARY MCLEOD BETHUNE ELEMENTARY SCHOOL/BROWN'S DUMP  
 DUVAL COUNTY SCHOOL BOARD  
 4330 PEARCE STREET  
 JACKSONVILLE, FLORIDA

PHASE 1 INTERIM MEASURES

FIGURE  
**1**  
 PROJECT NO.  
 71355.020.010



NAME: H:\CNC\1354\0204\010\00JSEPT.CNC DATE: JAN 31, 1994 TIME: 11:33 AM



EMCON

NO.	DATE	DESCRIPTION	BY	CHKD BY	APP'D BY
1					
2					
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8					
9					
10					

MARY MCLEOD BETHUNE ELEMENTARY SCHOOL/BROWN'S DUMP  
DUVAL COUNTY SCHOOL BOARD  
4330 PEARCE STREET  
JACKSONVILLE, FLORIDA

DEPTH TO ASH ENCOUNTERED IN THE  
DECEMBER 20, 21, AND 22, 1985 SOIL BORINGS

FIGURE

4

PROJECT NO.  
71365.020.010





**EMCON**

8021 Phillips Highway • Suite 12 • Jacksonville, Florida 32256-7460 • (904) 636-9360 • Fax (904) 635-9356

March 25, 1996  
Project 71286.001.090

Mary C. Nogas, P.E.  
Solid Waste Supervisor  
Florida Department of Environmental Protection  
7825 Baymeadows Way, Suite B200  
Jacksonville, Florida 32256-7590

Re: Proposed Locations of Off-Site Soil Samples at Brown's Dump Site  
Jacksonville, Florida

Dear Ms. Nogas:

As requested in your March 20, 1996, correspondence, we have transmitted the results of the off-site soil borings and the proposed locations for additional ash and soil sampling. We have drilled a total of 353 soil borings in the residential areas surrounding the Mary McLeod Bethune Elementary School, using a stainless steel hand auger. Figure 1 shows the location of the hand auger borings. Table 1 shows the soil boring designation, depth ash was encountered, existing cover, and approximate thickness of the ash. Based on the location of the ash encountered in the borings, the City proposes to drill 20 additional borings and collect ash and soil samples for chemical analyses from the residential areas surrounding the school. The samples will be transmitted under chain-of-custody to Southeastern Environmental Laboratories for analyses of total lead and Toxicity Characteristic Leaching Procedure (TCLP) lead.

The borings will be drilled using a truck-mounted CME 55 drill rig in areas where ash was previously detected with the hand auger. Figure 2 shows the area where ash was detected in the soil borings. Figure 2 also shows the proposed locations of ash and soil samples that will be transmitted to the laboratory for chemical analyses. Soil samples will be collected as outlined in the Florida Department of Environmental Protection (FDEP) approved Contamination Assessment Plan (CAP). The vertical extent of the ash will be determined in the areas where soil samples are collected.

The proposed ash and soil sample locations should provide a representative indication of the lead concentrations in the areas where ash was encountered in auger borings. Twenty samples will be collected from within the ash and twenty samples will be collected from below the ash and analyzed for total lead. The samples collected from within the ash will also be analyzed for TCLP lead.

Please call if you have questions.

Sincerely,

EMCON

Robert H. Young, P. G.  
Senior Hydrogeologist

cc: Lary Perkins (2)  
Greg Radlinski



**TABLES**

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**Table 1**  
**Off-Site Soil Borings**  
**Brown's Dump**  
**January 29, 30, 31 and February 1, 2, 13, and 21, 1996**

Page 1 of 12

Soil Boring Designation	Depth to Ash (inches)	Cover	Thickness of Ash (inches)
23	6 Below Grass Line	Grass	Unknown
24	4 Below Grass Line	Grass	Unknown
25	4 Below Grass Line	Grass	Unknown
26	3 Below Grass Line	Grass	Unknown
27	6 Below Grass Line	Grass	Unknown
28	No Ash Present	Grass	NA
29	3 Below Grass Line	Grass	Unknown
30	3 Below Grass Line	Grass	Approximately 2-3
31	3 Below Grass Line	Grass	Unknown
32	3 Below Grass Line	Grass	Unknown
33	3 Below Grass Line	Grass	Unknown
34	3 Below Grass Line	Grass	Unknown
35	3 Below Grass Line	Grass	Unknown
36	3 Below Grass Line	Grass	Unknown
37	3 Below Grass Line	Grass	Unknown
38	3 Below Grass Line	Grass	Approximately 1
39	3 Below Grass Line	Grass	Approximately 2
40	3 Below Grass Line	Grass	Approximately 2
41	3 Below Grass Line	Grass	Unknown
42	3 Below Grass Line	Grass	Unknown
43	3 Below Grass Line	Grass	Unknown
44	3 Below Grass Line	Grass	Unknown
45	3 Below Grass Line	Grass	Approximately 1
46	3 Below Grass Line	Grass	Approximately 2
47	3 Below Grass Line	Grass	Unknown
48	No Ash Present	Grass	NA
49	No Ash Present	Grass	NA
50	No Ash Present	Grass	NA



**Table 1**  
**Off-Site Soil Borings**  
**Brown's Dump**  
**January 29, 30, 31 and February 1, 2, 13, and 21, 1996**

Page 2 of 12

Soil Boring Designation	Depth to Ash (inches)	Cover	Thickness of Ash (inches)
51	No Ash Present	Grass	NA
52	No Ash Present	Grass	NA
53	6 Below Grass Line	Grass	Approximately 3
54	4 Below Grass Line	Grass	Unknown
55	No Ash Present	Grass	NA
56	13 Below Grass Line	Grass	Approximately 8-10
57	No Ash Present	Grass	NA
58	No Ash Present	Grass	NA
59	3 Below Grass Line	Grass	Unknown
60	3 Below Grass Line	Grass	Unknown
61	3 Below Grass Line	Grass	Unknown
62	4 Below Grass Line	Grass	Unknown
63	5 Below Grass Line	Grass	Unknown
64	4 Below Grass Line	Grass	Unknown
65	12 Below Grass Line	Grass	Unknown
66	8 Below Grass Line	Grass	Unknown
67	8 Below Grass Line	Grass	Unknown
68	8 Below Grass Line	Grass	Approximately 6
69	4 Below Grass Line	Grass	Approximately 4
70	No Ash Present	Grass	NA
71	3 Below Grass Line	Grass	Approximately 3
72	No Ash Present	Grass	NA
73	3 Below Grass Line	Grass	Approximately 3
74	2 Below Grass Line	Grass	Approximately 2
75	1 Below Grass Line	Grass	Approximately 2
76	6 Below Grass Line	Grass	Unknown
77	3 Below Grass Line	Grass	Unknown
78	Immediately Below Grass Line	Grass	Unknown
79	30 Below Grass Line	Grass	Approximately 2-3

**Table 1**  
**Off-Site Soil Borings**  
**Brown's Dump**  
**January 29, 30, 31 and February 1, 2, 13, and 21, 1996**

Page 3 of 12

Soil Boring Designation	Depth to Ash (inches)	Cover	Thickness of Ash (inches)
80	No Ash Present	Grass	NA
81	No Ash Present	Grass	NA
82	8 Below Grass Line	Grass	Unknown
83	10 Below Grass Line	Grass	Unknown
84	18 Below Grass Line	Grass	Unknown
85	10 Below Grass Line	Grass	Unknown
86	6 Below Grass Line	Grass	Unknown
87	No Ash Present	Grass	NA
88	No Ash Present	Grass	NA
89	No Ash Present	Grass	NA
90	No Ash Present	Grass	NA
91	No Ash Present	Grass	NA
92	No Ash Present	Grass	NA
93	No Ash Present	Grass	NA
94	No Ash Present	Grass	NA
95	No Ash Present	Grass	NA
96	No Ash Present	Grass	NA
97	No Ash (Surface Glass)	Grass	NA
98	No Ash (Surface Glass)	Grass	NA
99	2 Below Grass Line	Grass	Approximately 4-5
100	3 Below Grass Line	Grass	Unknown
101	No Ash Present	Grass	NA
102	No Ash Present	Grass	NA
103	3 Below Grass Line	Grass	Unknown
104	3 Below Grass Line	Grass	Unknown
105	3 Below Grass Line	Grass	Unknown
106	3 Below Grass Line	Grass	Unknown
107	2 Below Grass Line	Grass	Unknown
108	3 Below Grass Line	Grass	Unknown

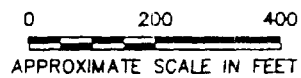
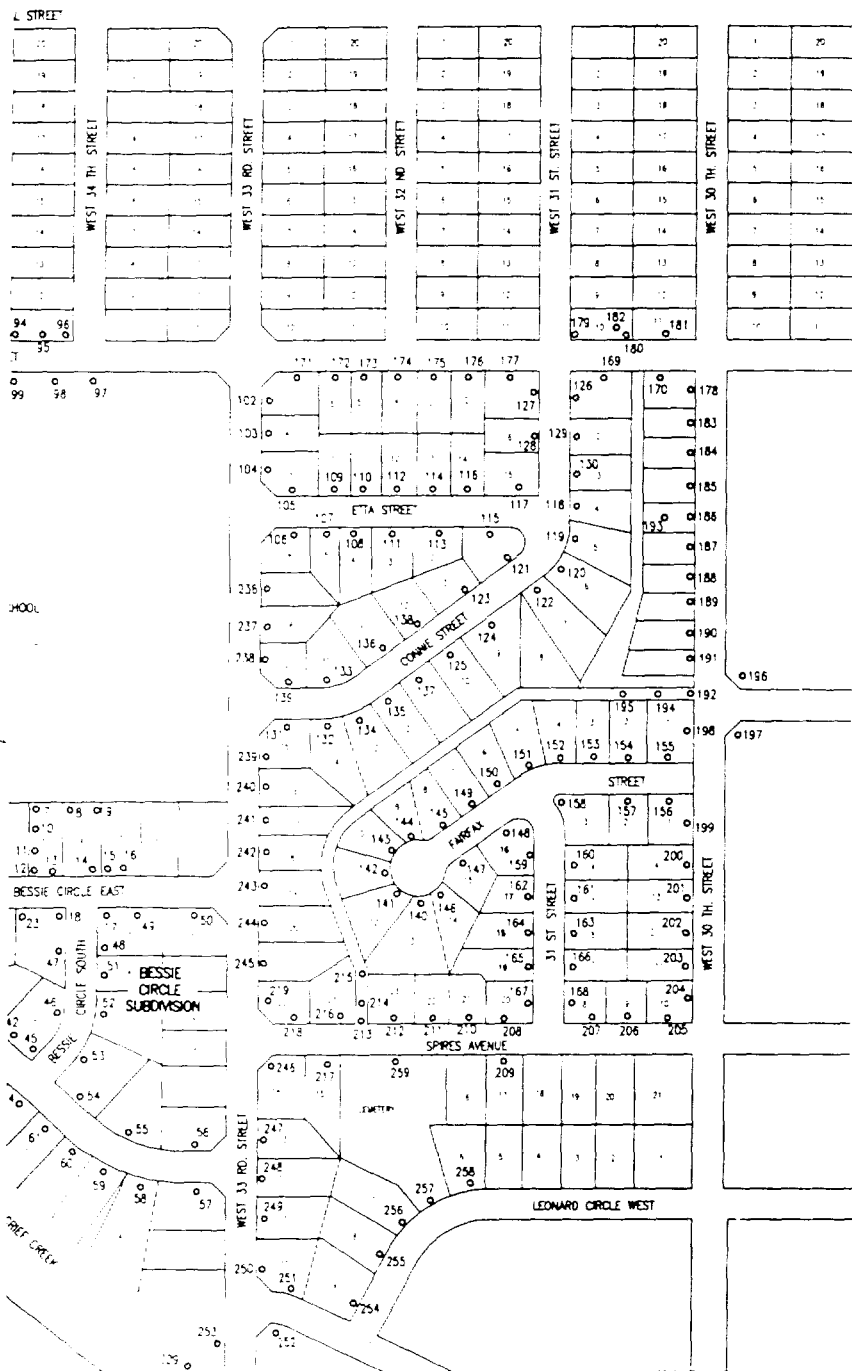
**Table 1**  
**Off-Site Soil Borings**  
**Brown's Dump**  
**January 29, 30, 31 and February 1, 2, 13, and 21, 1996**

Page 4 of 12

Soil Boring Designation	Depth to Ash (inches)	Cover	Thickness of Ash (inches)
109	3 Below Grass Line	Grass	Unknown
110	3 Below Surface	Soil	Unknown
111	3 Below Grass Line	Grass	Unknown
112	3 Below Surface	Soil	Unknown
113	4 Below Grass Line	Grass	Unknown
114	1 Below Surface	Soil	Unknown
115	No Ash Present	Grass	NA
116	No Ash Present	Grass	NA
117	No Ash Present	Grass	NA
118	3 Below Grass Line	Grass	Unknown
119	4 Below Grass Line	Grass	Unknown
120	8 Below Grass Line	Grass	Unknown
121	2 Below Grass Line	Grass	Unknown
122	2 Below Grass Line	Grass	Unknown
123	3 Below Grass Line	Grass	Unknown
124	3 Below Grass Line	Grass	Unknown
125	3 Below Grass Line	Grass	Unknown
126	4 Below Grass Line	Grass	Approximately 3
127	No Ash Present	Grass	NA
128	No Ash Present	Grass	NA
129	6 Below Grass Line	Grass	Approximately 3
130	No Ash Present	Grass	NA
131	No Ash Present	Grass	NA
132	6 Below Grass Line	Grass	Approximately 1
133	No Ash Present	Grass	NA
134	No Ash Present	Grass	NA
135	No Ash Present	Grass	NA
136	No Ash Present	Grass	NA
137	No Ash Present	Grass	NA

# FIGURES

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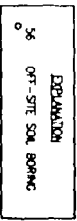
MARY MCLEOD BETHUNE ELEMENTARY  
SCHOOL / BROWN'S DUMP  
4330 PEARCE STREET  
JACKSONVILLE, FLORIDA

OFF-SITE SOIL BORINGS

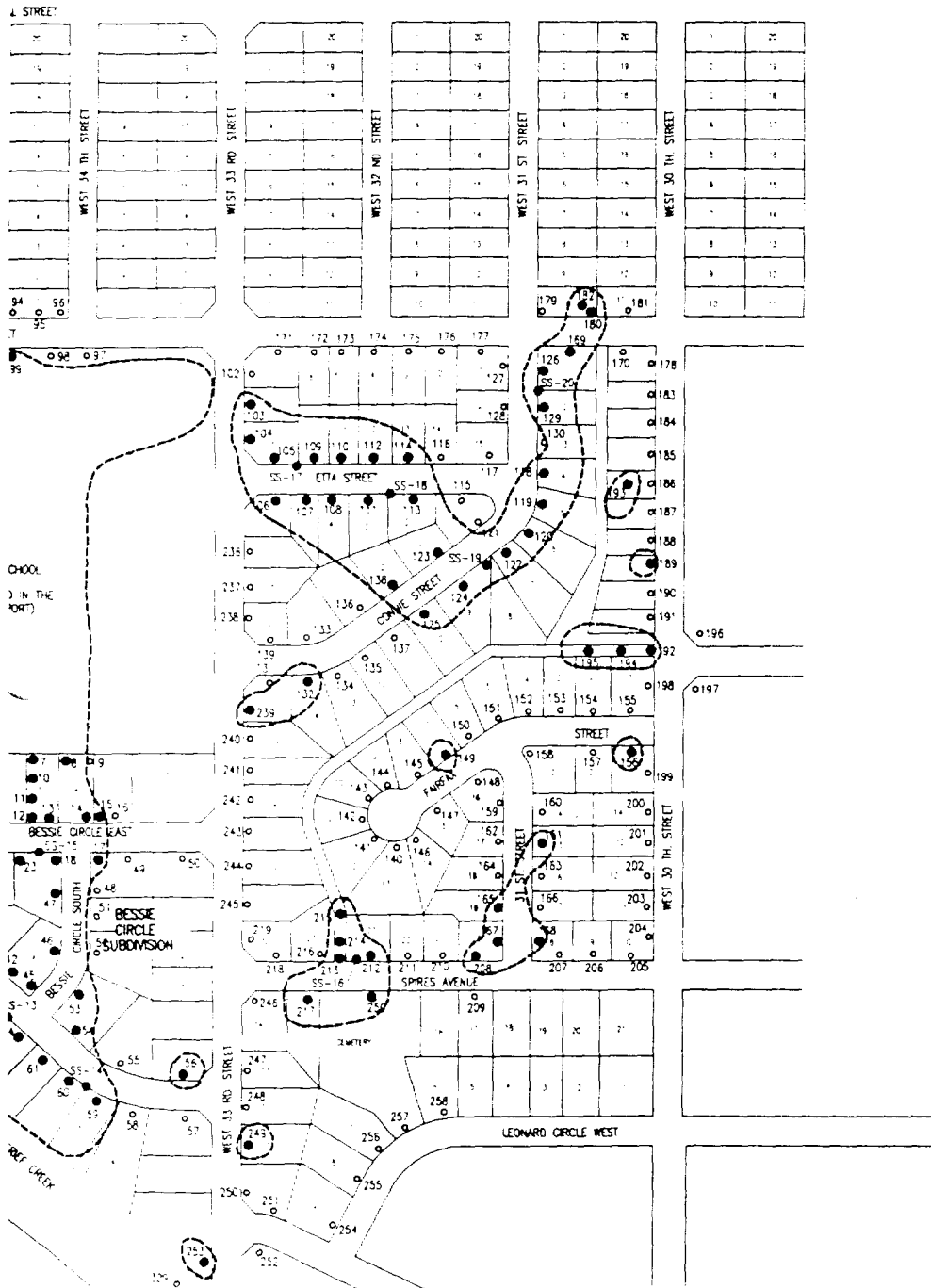
FIGURE

1

PROJECT NO.  
71286.001.090



NAME: N:\CWC\1236\CC\001.DWG DATE: MAR 22, 1996 TIME: 1:21 PM



0 200 400  
APPROXIMATE SCALE IN FEET

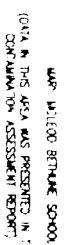
MARY MCLEOD BETHUNE ELEMENTARY  
SCHOOL / BROWN'S DUMP  
4330 PEARCE STREET  
JACKSONVILLE, FLORIDA

APPROXIMATE EXTENT OF ASH

FIGURE

2

PROJECT NO.  
71286.001.090



NAME N:\DMG\1286\00\*\002ASH.DMG DATE MAR 22, 1996 TIME 2:25 PM

[illegible]





**EMCON**

8021 Phillips Highway • Suite 12 • Jacksonville, Florida 32256-7460 • (904) 636-9360 • Fax (904) 636-9356

June 28, 1996

Project 71286.001.090.001

Mary C. Nogas, P.E.  
Solid Waste Supervisor  
Florida Department of Environmental Protection  
7825 Baymeadows Way, Suite B200  
Jacksonville, Florida 32256-7590

Re: Contamination Assessment - Brown's Dump  
Jacksonville, Florida

Dear Ms. Nogas:

As discussed in our June 21, 1996, telephone conversation, EMCON is submitting the results of the recent ash sampling in the area of Brown's Dump.

EMCON collected 40 samples using the methodology described in the Contamination Assessment Plan (CAP). Samples were collected from within the ash and from below the ash using a solid stem auger and a truck mounted drill rig. The samples were containerized, placed on ice, and transmitted to Southeastern Environmental Laboratories for analyses of total lead. Figure 1 shows the location of the collected samples. Table 1 presents the analytical test results for total lead and select Toxicity Characteristic Leaching Procedure (TCLP) samples of the ash. Complete analytical reports are presented in Attachment 1. As shown in Table 1, with the exception of one sample, the samples collected from within the ash and below the ash were consistent with the previous analytical data collected from the Mary McLeod Bethune Elementary School site. Total lead concentrations in samples collected from within the ash ranged from 34.5 milligrams per kilogram (mg/Kg) in sample SS-20 to 4,000 mg/Kg in sample SS-4.

One sample collected from within the ash at sample location SS-5 had a total lead concentration of 78,800 mg/Kg. This sample was analyzed by the TCLP for lead. The TCLP lead analysis was 440 milligrams per liter (mg/L). A second sample (SS-5A) was collected from the same area (approximately 5 ft away) as SS-5 and transmitted to Southeastern Environmental Laboratories for analyses of total lead and TCLP lead. Chemical analyses indicated a concentration of 43,400 mg/Kg total lead and 181 mg/L TCLP lead.



Mary C. Nogas, P.E.  
June 28, 1996  
Page 2

Project 71286.001.090.001

Samples SS-5 and SS-5A are isolated near the northern edge of the site and do not appear to be related to the other ash samples analyzed throughout the site. The lead concentrations in these samples may be from indiscriminate dumping. Possible sources of lead from dumping may include lead solder, lead pipes, x-rays, batteries, and ceramics.

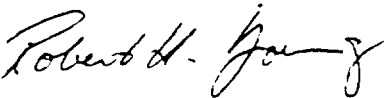
Samples collected from below the ash reported lead concentrations ranging from 2.18 mg/Kg in SS-7 to 482 mg/Kg in sample SS-3, which is below federal screening levels of 500 mg/Kg.

EMCON's risk assessment report should be available the second week in July 1996. Presently, we are trying to get additional data from the HRS Duval County Public Health Unit. We would like to incorporate the data into the report for a more complete analysis of any risks at the site.

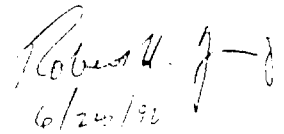
Please call if you have questions regarding the latest sampling event.

Sincerely,

EMCON



Robert H. Young, P.G.  
Senior Hydrogeologist



Attachments: Figure 1  
Table 1  
Attachment 1

cc: Lary Perkins  
Chris Pearson  
Greg Radlinski  
Bruce Ackerman



**Table 1**  
**Summary of Ash Analysis**  
**Brown's Dump**  
**Jacksonville, Florida**

**April 9-10, 1996**

Page 1 of 2

		Total Lead Concentrations (mg/Kg)	TCLP Lead Concentrations (mg/L)
SS-1	Within Ash	779	
	Below Ash	49.9	
SS-2 <sup>a</sup>	Within Ash	43.4	
	Below Ash	427	
SS-3	Within Ash	3,180	
	Below Ash	482	
SS-4	Within Ash	4,000	
	Below Ash	No Sample Collected	
SS-5	Within Ash	78,800	440
	Below Ash	357	
SS-6	Within Ash	No Sample Collected	
	Below Ash	57.6	
SS-7	Within Ash	318	
	Below Ash	2.18	
SS-8	Within Ash	374	
	Below Ash	4.71	
SS-9	Within Ash	1,280	
	Below Ash	43.7	
SS-10	Within Ash	307	
	Below Ash	26.8	
SS-11	Within Ash	1,950	
	Below Ash	28.4	
SS-12	Within Ash	172	
	Below Ash	16.6	
SS-13	Within Ash	334	

Table 1

**Summary of Ash Analysis  
Brown's Dump  
Jacksonville, Florida**

**April 9-10, 1996**

Page 2 of 2

	Total Lead Concentrations (mg/Kg)	TCLP Lead Concentrations (mg/L)
Below Ash	13.5	
SS-14		
Within Ash	3,610	
Below Ash	110	
SS-15		
Within Ash	307	
Below Ash	2.48	
SS-16		
Within Ash	No Sample Collected	
Below Ash	21.6	
SS-17		
Within Ash	196	
Below Ash	6.08	
SS-18		
Within Ash	98.1	
Below Ash	4.41	
SS-19		
Within Ash	342	
Below Ash	25.7	
SS-20		
Within Ash	34.5	
Below Ash	7.69	
SS-5A <sup>b</sup>		
Within Ash	43,400	181
Below Ash	3.28	
NOTE: mg/Kg = milligrams per kilogram. mg/L = milligrams per liter. TCLP = Toxicity Characteristic Leaching Procedure. <sup>a</sup> Sample designations may be reversed. <sup>b</sup> Sample collected June 3, 1996.		

## **ATTACHMENT 1**

1 2 033

DHRS # 82315

Southeastern Environmental  
Laboratories, Inc.  
80 Industrial Loop North, Building 5  
Orange Park, FL 32073  
(904) 269-6176

DHRS E-82179

CQAP #880633G

RECEIVED  
SOLID WASTE DISPOSAL

MAY 2 1996

DEPARTMENT OF PUBLIC UTILITIES  
SOLID WASTE DIVISION  
515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
ATTN: LARY PERKINS

☐ READING FILE ☐ LOFS

SAMPLED BY: EMCON  
CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: BROWNS DUMP 71286.001.090  
SUBMISSION NUMBER: 9604000171  
REPORTED DATE: 04/30/96

DESCRIPTION	SAMPLE ID						
SS-1 BELOW ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58778	49.9	MG/KG	7420	LC	1130	04/29/9

DESCRIPTION	SAMPLE ID						
SS-1 WITHIN ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58777	779	MG/KG	7420	LC	1130	04/29/9

DESCRIPTION	SAMPLE ID						
SS-10 BELOW ASH							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58797	26.8	MG/KG	7420	LC	1130	04/29/9

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Orange Park, FL 32073  
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515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
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SAMPLED BY: EMCON  
CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: BROWNS DUMP 71286.001.090  
SUBMISSION NUMBER: 9604000171  
REPORTED DATE: 04/30/96

DESCRIPTION	SAMPLE ID						
SS-10 WITHIN ASH							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58796	307	MG/KG	7420	LC	1130	04/29/96

DESCRIPTION	SAMPLE ID						
SS-11 BELOW ASH							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58799	28.4	MG/KG	7420	LC	1130	04/29/96

DESCRIPTION	SAMPLE ID						
SS-11 WITHIN ASH							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58798	1950	MG/KG	7420	LC	1130	04/29/96



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CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: BROWNS DUMP 71286.001.090  
SUBMISSION NUMBER: 9604000171  
REPORTED DATE: 04/30/96

DESCRIPTION	SAMPLE ID						
SS-12 BELOW ASH							
=====							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58801	16.6	MG/KG	7420	LC	1130	04/29/96

DESCRIPTION	SAMPLE ID						
SS-12 WITHIN ASH							
=====							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58800	172	MG/KG	7420	LC	1130	04/29/96

DESCRIPTION	SAMPLE ID						
SS-13 BELOW ASH							
=====							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58803	13.5	MG/KG	7420	LC	1130	04/29/96

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CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: BROWNS DUMP 71286.001.090  
SUBMISSION NUMBER: 9604000171  
REPORTED DATE: 04/30/96

DESCRIPTION	SAMPLE ID						
SS-13 WITHIN ASH							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58802	334	MG/KG	7420	LC	1130	04/29/9

DESCRIPTION	SAMPLE ID						
SS-14 BELOW ASH							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58805	110	MG/KG	7420	LC	1130	04/29/9

DESCRIPTION	SAMPLE ID						
SS-14 WITHIN ASH							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58804	3610	MG/KG	7420	LC	1130	04/29/9

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DEPARTMENT OF PUBLIC UTILITIES  
SOLID WASTE DIVISION  
515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
ATTN: LARY PERKINS

SAMPLED BY: EMCON  
CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: BROWNS DUMP 71286.001.090  
SUBMISSION NUMBER: 9604000171  
REPORTED DATE: 04/30/96

DESCRIPTION	SAMPLE ID						
SS-15 BELOW ASH							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58807	2.48	MG/KG	7420	LC	1130	04/29/9

DESCRIPTION	SAMPLE ID						
SS-15 WITHIN ASH							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58806	307	MG/KG	7420	LC	1130	04/29/9

DESCRIPTION	SAMPLE ID						
SS-16 BELOW ASH							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58789	21.6	MG/KG	7420	LC	1130	04/29/9

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SOLID WASTE DIVISION  
515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
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CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: BROWNS DUMP 71286.001.090  
SUBMISSION NUMBER: 9604000171  
REPORTED DATE: 04/30/96

DESCRIPTION	SAMPLE ID						
SS-17 BELOW ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58772	6.08	MG/KG	7420	LC	1130	04/29/9

DESCRIPTION	SAMPLE ID						
SS-17 WITHIN ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58771	196	MG/KG	7420	LC	1130	04/29/9

DESCRIPTION	SAMPLE ID						
SS-18 BELOW ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58774	4.41	MG/KG	7420	LC	1130	04/29/9

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Orange Park, FL 32073  
(904) 269-6176

DMRS E-82179

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515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
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CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: BROWNS DUMP 71286.001.090  
SUBMISSION NUMBER: 9604000171  
REPORTED DATE: 04/30/96

DESCRIPTION	SAMPLE ID						
SS-18 WITHIN ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58773	98.1	MG/KG	7420	LC	1130	04/29/9

DESCRIPTION	SAMPLE ID						
SS-19 BELOW ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58776	25.7	MG/KG	7420	LC	1130	04/29/9

DESCRIPTION	SAMPLE ID						
SS-19 WITHIN ASH							
SAMPLE DATE: 04/09/96							
ARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58775	342	MG/KG	7420	LC	1130	04/29/9

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Orange Park, FL 32073  
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CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: BROWNS DUMP 71286.001.090  
SUBMISSION NUMBER: 9604000171  
REPORTED DATE: 04/30/96

DESCRIPTION	SAMPLE ID						
SS-2 BELOW ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58780	427	MG/KG	7420	LC	1130	04/29/9

DESCRIPTION	SAMPLE ID						
SS-2 WITHIN ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58779	43.4	MG/KG	7420	LC	1130	04/29/9

DESCRIPTION	SAMPLE ID						
SS-20 BELOW ASH							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58791	7.69	MG/KG	7420	LC	1130	04/29/9

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Orange Park, FL 32073  
(904) 269-6176

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CQAP #880633G

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JACKSONVILLE, FL 32202-3156  
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SAMPLED BY: EMCON  
CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: BROWNS DUMP 71286.001.090  
SUBMISSION NUMBER: 9604000171  
REPORTED DATE: 04/30/96

DESCRIPTION	SAMPLE ID						
SS-20 WITHIN ASH							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58790	34.5	MG/KG	7420	LC	1130	04/29/96

DESCRIPTION	SAMPLE ID						
SS-3 BELOW ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58782	482	MG/KG	7420	LC	1130	04/29/96

DESCRIPTION	SAMPLE ID						
SS-3 WITHIN ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58781	3180	MG/KG	7420	LC	1130	04/29/96

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Orange Park, FL 32073  
(904) 269-6176

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SOLID WASTE DIVISION  
515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
ATTN: LARY PERKINS

SAMPLED BY: EMCON  
CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: BROWNS DUMP 71286.001.090  
SUBMISSION NUMBER: 9604000171  
REPORTED DATE: 04/30/96

DESCRIPTION				SAMPLE ID			
SS-4 WITHIN ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58788	4000	MG/KG	7420	LC	1130	04/29/96

DESCRIPTION				SAMPLE ID			
SS-5 BELOW ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58786	357	MG/KG	7420	LC	1130	04/29/96

DESCRIPTION				SAMPLE ID			
SS-5 WITHIN ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58787	78800	MG/KG	7420	LC	1130	04/29/96



Southeastern Environmental  
Laboratories, Inc.  
80 Industrial Loop North, Building 5  
Orange Park, FL 32073  
(904) 269-6176

DHRS # 82315

DHRS E-82179

CQAP #880633G

DEPARTMENT OF PUBLIC UTILITIES  
SOLID WASTE DIVISION  
515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
ATTN: LARY PERKINS

SAMPLED BY: EMCON  
CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: BROWNS DUMP 71286.001.090  
SUBMISSION NUMBER: 9604000171  
REPORTED DATE: 04/30/96

DESCRIPTION	SAMPLE ID						
SS-6 BELOW ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58785	57.6	MG/KG	7420	LC	1130	04/29/96

DESCRIPTION	SAMPLE ID						
SS-7 BELOW ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58784	2.18	MG/KG	7420	LC	1130	04/29/96

DESCRIPTION	SAMPLE ID						
SS-7 WITHIN ASH							
SAMPLE DATE: 04/09/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58783	318	MG/KG	7420	LC	1130	04/29/96

DHRS # 82315

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Orange Park, FL 32073  
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DHRS E-82179

CQAP #880633G

DEPARTMENT OF PUBLIC UTILITIES  
SOLID WASTE DIVISION  
515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
ATTN: LARY PERKINS

SAMPLED BY: EMCON  
CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: BROWNS DUMP 71286.001.090  
SUBMISSION NUMBER: 9604000171  
REPORTED DATE: 04/30/96

DESCRIPTION	SAMPLE ID						
SS-8 BELOW ASH							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58793	4.71	MG/KG	7420	LC	1130	04/29/96

DESCRIPTION	SAMPLE ID						
SS-8 WITHIN ASH							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58792	374	MG/KG	7420	LC	1130	04/29/96

DESCRIPTION	SAMPLE ID						
SS-9 BELOW ASH							
SAMPLE DATE: 04/10/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58795	43.7	MG/KG	7420	LC	1130	04/29/96

DHRS # 82315

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DHRS E-82179

CQAP #880633G

DEPARTMENT OF PUBLIC UTILITIES  
SOLID WASTE DIVISION  
515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
ATTN: LARY PERKINS

SAMPLED BY: EMCON  
CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: BROWNS DUMP 71286.001.090  
SUBMISSION NUMBER: 9604000171  
REPORTED DATE: 04/30/96

DESCRIPTION

SAMPLE ID

SS-9 WITHIN ASH

SAMPLE DATE: 04/10/96

PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	58794	1280	MG/KG	7420	LC	1130	04/29/9

DHRS # 82315

Southeastern Environmental  
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80 Industrial Loop North, Building 5  
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SOUTHEASTERN ENVIRONMENTAL LABORATORIES, INC.  
SUBMISSION RECEIVAL FORM

SUBMISSION #: 9604000171  
DATE RECEIVED: 04/18/96  
CLIENT NAME: DEPARTMENT OF PUBLIC UTILITIES

ORDER #	FIELD ID	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME
58771		SS-17 WITHIN ASH	04/09/96	10:49
58772		SS-17 BELOW ASH	04/09/96	10:49
58773		SS-18 WITHIN ASH	04/09/96	11:20
58774		SS-18 BELOW ASH	04/09/96	11:20
58775		SS-19 WITHIN ASH	04/09/96	11:50
58776		SS-19 BELOW ASH	04/09/96	11:50
58777		SS-1 WITHIN ASH	04/09/96	13:30
58778		SS-1 BELOW ASH	04/09/96	13:30
58779		SS-2 WITHIN ASH	04/09/96	13:50
58780		SS-2 BELOW ASH	04/09/96	13:50
58781		SS-3 WITHIN ASH	04/09/96	14:00
58782		SS-3 BELOW ASH	04/09/96	14:00
58783		SS-7 WITHIN ASH	04/09/96	14:10
58784		SS-7 BELOW ASH	04/09/96	14:10
58785		SS-6 BELOW ASH	04/09/96	14:30
58786		SS-5 BELOW ASH	04/09/96	14:55
58787		SS-5 WITHIN ASH	04/09/96	14:55
58788		SS-4 WITHIN ASH	04/09/96	16:30
58789		SS-16 BELOW ASH	04/10/96	08:50
58790		SS-20 WITHIN ASH	04/10/96	09:15
58791		SS-20 BELOW ASH	04/10/96	09:15
58792		SS-8 WITHIN ASH	04/10/96	09:40
58793		SS-8 BELOW ASH	04/10/96	09:40
58794		SS-9 WITHIN ASH	04/10/96	10:00
58795		SS-9 BELOW ASH	04/10/96	10:00
58796		SS-10 WITHIN ASH	04/10/96	10:30
58797		SS-10 BELOW ASH	04/10/96	10:30
58798		SS-11 WITHIN ASH	04/10/96	11:03
58799		SS-11 BELOW ASH	04/10/96	11:03
58800		SS-12 WITHIN ASH	04/10/96	11:30
58801		SS-12 BELOW ASH	04/10/96	11:30
58802		SS-13 WITHIN ASH	04/10/96	12:00
58803		SS-13 BELOW ASH	04/10/96	12:00
58804		SS-14 WITHIN ASH	04/10/96	12:20
58805		SS-14 BELOW ASH	04/10/96	12:20
58806		SS-15 WITHIN ASH	04/10/96	12:50

DHRS # 82315

**Southeastern Environmental  
Laboratories, Inc.**  
80 Industrial Loop North, Building 5  
Orange Park, FL 32073  
(904) 269-6176

DHRS E-82179

**SOUTHEASTERN ENVIRONMENTAL LABORATORIES, INC.  
SUBMISSION RECEIVAL FORM**

SUBMISSION #: 9604000171

DATE RECEIVED: 04/18/96

CLIENT NAME: DEPARTMENT OF PUBLIC UTILITIES

ORDER #	FIELD ID	SAMPLE DESCRIPTION
58807		SS-15 BELOW ASH

SAMPLE DATE	SAMPLE TIME
04/10/96	12:50

Approved By: 

Pamela L. Rivers  
Laboratory Manager

Southeastern Environmental  
Laboratories, Inc.  
80 Industrial Loop North, Building 5  
Orange Park, FL 32073  
(904) 269-6176

# CHAIN OF CUSTODY RECORD

Client: City of Jax.  
Larry Perkins

## PROJECT DESCRIPTION

Brown's Dump  
71286.001.090

ATTN:

NO. OF SAMPLE CONTAINERS

ANALYSIS REQUEST  
Pb

SAMPLER (SIGNATURE)

96-4-171

Page \_\_\_ of \_\_\_

FIELD ID #	DATE	TIME (MILITARY)	SAMPLE DESCRIPTION	FT. DTW	COND.	TEMP.	pH	D.O.
SS-17 Within Ash	4/9	1049	Soil	Xo				
SS-17 Below Ash		1049						
SS-18 Within Ash		1120						
SS-18 Below Ash		1120						
SS-19 Within Ash		1150						
SS-19 Below Ash		1150						
SS-1 Within Ash		1330						
SS-1 Below Ash		1330						
SS-2 Within Ash		1350						
SS-2 Below Ash		1350						

RELINQUISHED BY (SIGNATURE)	DATE	TIME (MILITARY)	RECEIVED BY (SIGNATURE)	DATE	TIME (MILITARY)	RELINQUISHED BY (SIGNATURE)	DATE	TIME (MILITARY)	RECEIVED BY (SIGNATURE)	DATE	TIME (MILITARY)
ALON N/A	4/11/96	1625	[Signature]	4/11/96	1625						

REMARKS: Please Save Samples for

Client: City of Jax  
Larry Perkins

ATTN:

Brown's Dump  
71286.001.090

NO. OF SAMPLE CONTAINERS

ANALYSIS REQUEST

SAMPLER (SIGNATURE)

Page \_\_\_\_ of \_\_\_\_

FIELD ID #	DATE	TIME (MILITARY)	SAMPLE DESCRIPTION																FT. DTW	COND.	TEMP.	pH	D.O.
SS-3 Within Ash	4/9	1400	Soil	Xo																			
SS-3 Below Ash		1400		a																			
SS-2 " Within Ash		1410		a																			
SS-7 Below Ash		1410		a																			
SS-6 <del>Below</del> Ash		1430		a																			
SS-5 Below Ash		1455		a																			
SS-5 Within Ash		1455		a																			
SS-4 Within Ash		1630		a																			
	↓		↓	↓																			
RELINQUISHED BY (SIGNATURE)	DATE	TIME (MILITARY)	RECEIVED BY (SIGNATURE)	DATE	TIME (MILITARY)	RELINQUISHED BY (SIGNATURE)	DATE	TIME (MILITARY)	RECEIVED BY (SIGNATURE)	DATE	TIME (MILITARY)	RELINQUISHED BY (SIGNATURE)	DATE	TIME (MILITARY)	RECEIVED BY (SIGNATURE)	DATE	TIME (MILITARY)						

1C  
Southeastern Environmental  
Laboratories, Inc.  
80 Industrial Loop North, Building 5  
Orange Park, FL 32073  
(904) 269-6176

# CHAIN OF CUSTODY RECORD

Client:

City of Jax  
Larry Perkins

## PROJECT DESCRIPTION

ATTN:

Brown's Dump  
71286-001-090

NO. OF SAMPLE CONTAINERS

SAMPLER (SIGNATURE)

ANALYSIS REQUEST  
Pb

Page \_\_\_\_ of \_\_\_\_

FIELD ID #	DATE	TIME (MILITARY)	SAMPLE DESCRIPTION	ANALYSIS REQUEST										FT. DTW	COND.	TEMP.	pH	D.O.
SS-16 Below Ash	4/10	08:50	Soil	X														
SS-20 Within Ash		09:15		0														
SS-20 Below Ash		09:15		0														
SS-8 Within Ash		09:40		0														
SS-8 Below Ash		09:40		0														
SS-9 Within Ash		10:00		0														
<del>SS-9</del> Below Ash		10:00		0														
SS-10 Within Ash		10:30		0														
SS-10 Below Ash		10:30		0														
RELINQUISHED BY (SIGNATURE)	DATE	TIME (MILITARY)	RECEIVED BY (SIGNATURE)	DATE	TIME (MILITARY)	RELINQUISHED BY (SIGNATURE)	DATE	TIME (MILITARY)	RECEIVED BY (SIGNATURE)	DATE	TIME (MILITARY)	RECEIVED BY (SIGNATURE)	DATE	TIME (MILITARY)				
M.D. D. C. A.	4/10	09:35	R. Perkins	4/10	09:35	REMARKS: Please Save Samples for Possible Trip to												



Southeastern Environmental  
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80 Industrial Loop North, Building 5  
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# CHAIN OF CUSTODY RECORD

Client:

City of Jax.  
Larry Perkins

## PROJECT DESCRIPTION

Brown's Dump  
71286.001.090

ATTN:

NO. OF SAMPLE CONTAINERS

SAMPLER (SIGNATURE)

ANALYSIS REQUEST  
Pb

Page \_\_\_\_ of \_\_\_\_

FIELD ID #	DATE	TIME (MILITARY)	SAMPLE DESCRIPTION	FT. DTW	COND.	TEMP.	pH	D.O.			
SS-11 Within Ash	4/10	11:03	Soil	X							
SS-11 Below Ash		11:03									
SS-12 Within Ash		11:30									
SS-12 Below Ash		11:30									
SS-13 Within Ash		12:00									
SS-13 Below Ash		12:00									
SS-14 Within Ash		12:20									
SS-14 Below Ash		12:20									
SS-15 Within Ash		12:50									
SS-15 Below Ash		12:50									
RELINQUISHED BY (SIGNATURE)	DATE	TIME (MILITARY)	RECEIVED BY (SIGNATURE)	DATE	TIME (MILITARY)	RELINQUISHED BY (SIGNATURE)	DATE	TIME (MILITARY)	RECEIVED BY (SIGNATURE)	DATE	TIME (MILITARY)
M.D.D. A.											
RELINQUISHED BY (SIGNATURE)	DATE	TIME (MILITARY)	RECEIVED BY (SIGNATURE)	DATE	TIME (MILITARY)	REMARKS: Please Save Samples for					

DHRS # 82315

Southeastern Environmental  
Laboratories, Inc.  
80 Industrial Loop North, Building 5  
Orange Park, FL 32073  
(904) 269-6176

DHRS E-82179

CQAP #880633G

DEPARTMENT OF PUBLIC UTILITIES  
SOLID WASTE DIVISION  
515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
ATTN: LARY PERKINS

SAMPLED BY: CLIENT  
CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: BROWNS DUMP 71286.001.090  
SUBMISSION NUMBER: 9605000134  
REPORTED DATE: 05/28/96

DESCRIPTION

SAMPLE ID

SS-5 WITHIN ASH

SAMPLE DATE: 04/09/96

PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
TCLP Lead	60469	440	MG/L	1311/7420	TS	1300	05/24/96

DHRS # 82315

**Southeastern Environmental  
Laboratories, Inc.**  
80 Industrial Loop North, Building 5  
Orange Park, FL 32073  
(904) 269-6176

DHRS E-821

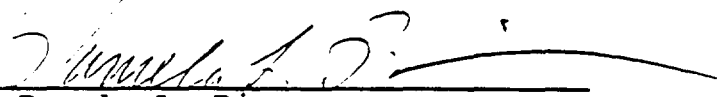
**SOUTHEASTERN ENVIRONMENTAL LABORATORIES, INC.  
SUBMISSION RECEIVAL FORM**

**SUBMISSION #: 9605000134**

**DATE RECEIVED: 05/16/96**

**CLIENT NAME: DEPARTMENT OF PUBLIC UTILITIES**

ORDER #	FIELD ID	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME
60469		SS-5 WITHIN ASH	04/09/96	14:55

Approved By:   
Pamela L. Rivers  
Laboratory Manager

DHRS # 82315

Southeastern Environmental  
Laboratories, Inc.  
80 Industrial Loop North, Building 5  
Orange Park, FL 32073  
(904) 269-6176

DHRS E-82179

CQAP #880633G

DEPARTMENT OF PUBLIC UTILITIES  
SOLID WASTE DIVISION  
515 NORTH LAURA ST. 6TH FLOOR  
JACKSONVILLE, FL 32202-3156  
ATTN: LARY PERKINS

SAMPLED BY: EMCON  
CLIENT JOB/PO NUMBER: BO 020055 PROJECT NAME: TASK001 BROWNS DUMP  
SUBMISSION NUMBER: 9606000013  
REPORTED DATE: 06/06/96

DESCRIPTION	SAMPLE ID						
SS-5A BELOW	SS-5AB						
SAMPLE DATE: 06/03/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	61518	3.28	MG/KG	7420	LC	1230	06/05/96

DESCRIPTION	SAMPLE ID						
SS-5A WITHIN	SS-5AW						
SAMPLE DATE: 06/03/96							
PARAMETER	ORDER NUMBER	RESULT	UNITS	METHOD	ANALYST INITIAL	TIME	DATE
Lead	61519	43400	MG/KG	7420	LC	1230	06/05/96
TCLP Lead	61519	181	MG/L	1311/7420	LC	1230	06/05/96

**Southeastern Environmental  
Laboratories, Inc.**80 Industrial Loop North, Building 5  
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DHRS # 82315

DHRS E-82179

**SOUTHEASTERN ENVIRONMENTAL LABORATORIES, INC.  
SUBMISSION RECEIVAL FORM**

SUBMISSION #: 9606000013

DATE RECEIVED: 06/03/96

CLIENT NAME: DEPARTMENT OF PUBLIC UTILITIES

ORDER #	FIELD ID	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME
61518	SS-SAB	SS-5A BELOW	06/03/96	
61519	SS-SAW	SS-5A WITHIN	06/03/96	

Approved By: Pamela L. Rivers  
Laboratory ManagerRECEIVED  
DEPT. OF PUBLIC UTILITIES

JUN 10 1996

CLERKING UNIT



**EMCON**

8021 Phillips Highway • Suite 12 • Jacksonville, Florida 32256-7460 • (904) 636-9360 • Fax (904) 636-9356

Summary of Additional Work at Brown's Dump

February 9, 1996  
Project 71286.001.090

Mary C. Nogas, P.E.  
Solid Waste Supervisor  
Florida Department of Environmental Protection  
7825 Bay meadows Way, Suite B200  
Jacksonville, Florida 32256-7590

**RECEIVED**

FEB 13 1996

Office of General Counsel  
Environmental Division

Re: Summary of Additional Work at Brown's Dump  
Jacksonville, Florida

Dear Ms. Nogas:

As discussed in our telephone conversation on Friday January 26, 1996, we have submitted the results of the additional 196 off-site soil borings (OSB-23 - OSB-219) drilled west, east, north, and south of the Mary McLeod Bethune Elementary School to define the lateral extent of the ash deposits. The soil borings were drilled using a stainless steel hand auger to depths ranging from 6 inches to 3 feet below land surface (bls). Ash was typically encountered at approximately 3 to 8 inches below the grass line. Table 1 describes the depth of the ash encountered in each boring. The thickness of the ash could not be determined in each boring because the ash cannot usually be penetrated using the hand auger. Figure 1 shows the locations of the borings.

These additional soil borings were installed on January 29, 30, and 31 and February 1 and 2, 1996.

Please call if you have questions.

Sincerely,

EMCON

*Chris J. Pellegrini, P.E.*  
*for*

Robert H. Young, P. G.  
Senior Hydrogeologist

Attachments: Figure 1  
Table 1

cc: Lary Perkins (2)  
Greg Radlinski  
Matt McClure  
Bruce Ackerman



**Table 1**  
**Off-Site Soil Borings**  
**Brown's Dump**  
**January 29, 30, 31 and February 1 and 2, 1996**

Page 1 of 6

Soil Boring Designation	Depth to Ash (inches)	Cover	Thickness of Ash (inches)
OSB-23	6" Below Grass Line	Grass	Unknown
OSB-24	4" Below Grass Line	Grass	Unknown
OSB-25	4" Below Grass Line	Grass	Unknown
OSB-26	3" Below Grass Line	Grass	Unknown
OSB-27	6" Below Grass Line	Grass	Unknown
OSB-28	No Ash Present	Grass	NA
OSB-29	3" Below Grass Line	Grass	Unknown
OSB-30	3" Below Grass Line	Grass	Approximately 2"-3"
OSB-31	3" Below Grass Line	Grass	Unknown
OSB-32	3" Below Grass Line	Grass	Unknown
OSB-33	3" Below Grass Line	Grass	Unknown
OSB-34	3" Below Grass Line	Grass	Unknown
OSB-35	3" Below Grass Line	Grass	Unknown
OSB-36	3" Below Grass Line	Grass	Unknown
OSB-37	3" Below Grass Line	Grass	Unknown
OSB-38	3" Below Grass Line	Grass	Approximately 1"
OSB-39	3" Below Grass Line	Grass	Approximately 2"
OSB-40	3" Below Grass Line	Grass	Approximately 2"
OSB-41	3" Below Grass Line	Grass	Unknown
OSB-42	3" Below Grass Line	Grass	Unknown
OSB-43	3" Below Grass Line	Grass	Unknown
OSB-44	3" Below Grass Line	Grass	Unknown
OSB-45	3" Below Grass Line	Grass	Approximately 1"
OSB-46	3" Below Grass Line	Grass	Approximately 2"
OSB-47	3" Below Grass Line	Grass	Unknown
OSB-48	No Ash Present	Grass	NA
OSB-49	No Ash Present	Grass	NA
OSB-50	No Ash Present	Grass	NA
OSB-51	No Ash Present	Grass	NA
OSB-52	No Ash Present	Grass	NA
OSB-53	6" Below Grass Line	Grass	Approximately 3"
OSB-54	4" Below Grass Line	Grass	Unknown
OSB-55	No Ash Present	Grass	NA
OSB-56	13" Below Grass Line	Grass	Approximately 8"-10"

**Table 1**  
**Off-Site Soil Borings**  
**Brown's Dump**  
**January 29, 30, 31 and February 1 and 2, 1996**

Page 2 of 6

Soil Boring Designation	Depth to Ash (inches)	Cover	Thickness of Ash (inches)
OSB-57	No Ash Present	Grass	NA
OSB-58	No Ash Present	Grass	NA
OSB-59	3" Below Grass Line	Grass	Unknown
OSB-60	3" Below Grass Line	Grass	Unknown
OSB-61	3" Below Grass Line	Grass	Unknown
OSB-62	4" Below Grass Line	Grass	Unknown
OSB-63	5" Below Grass Line	Grass	Unknown
OSB-64	4" Below Grass Line	Grass	Unknown
OSB-65	12" Below Grass Line	Grass	Unknown
OSB-66	8" Below Grass Line	Grass	Unknown
OSB-67	8" Below Grass Line	Grass	Unknown
OSB-68	8" Below Grass Line	Grass	Approximately 6"
OSB-69	4" Below Grass Line	Grass	Approximately 4"
OSB-70	No Ash Present	Grass	Unknown
OSB-71	3" Below Grass Line	Grass	Approximately 3"
OSB-72	No Ash Present	Grass	Unknown
OSB-73	3" Below Grass Line	Grass	Approximately 3"
OSB-74	2" Below Grass Line	Grass	Approximately 2"
OSB-75	1" Below Grass Line	Grass	Approximately 2"
OSB-76	6" Below Grass Line	Grass	Unknown
OSB-77	3" Below Grass Line	Grass	Unknown
OSB-78	Immediately Below Grass Line	Grass	Unknown
OSB-79	30" Below Grass Line	Grass	Approximately 2"-3"
OSB-80	No Ash Present	Grass	NA
OSB-81	No Ash Present	Grass	NA
OSB-82	8" Below Grass Line	Grass	Unknown
OSB-83	10" Below Grass Line	Grass	Unknown
OSB-84	18" Below Grass Line	Grass	Unknown
OSB-85	10" Below Grass Line	Grass	Unknown
OSB-86	6" Below Grass Line	Grass	Unknown
OSB-87	No Ash Present	Grass	NA
OSB-88	No Ash Present	Grass	NA
OSB-89	No Ash Present	Grass	NA
OSB-90	No Ash Present	Grass	NA



Table 1

**Off-Site Soil Borings  
Brown's Dump  
January 29, 30, 31 and February 1 and 2, 1996**

Page 3 of 6

Soil Boring Designation	Depth to Ash (inches)	Cover	Thickness of Ash (inches)
OSB-91	No Ash Present	Grass	NA
OSB-92	No Ash Present	Grass	NA
OSB-93	No Ash Present	Grass	NA
OSB-94	No Ash Present	Grass	NA
OSB-95	No Ash Present	Grass	NA
OSB-96	No Ash Present	Grass	NA
OSB-97	No Ash (Surface Glass)	Grass	NA
OSB-98	No Ash (Surface Glass)	Grass	NA
OSB-99	2" Below Grass Line	Grass	Approximately 4"-5"
OSB-100	3" Below Grass Line	Grass	Unknown
OSB-101	No Ash Present	Grass	Unknown
OSB-102	No Ash Present	Grass	NA
OSB-103	3" Below Grass Line	Grass	Unknown
OSB-104	3" Below Grass Line	Grass	Unknown
OSB-105	3" Below Grass Line	Grass	Unknown
OSB-106	3" Below Grass Line	Grass	Unknown
OSB-107	2" Below Grass Line	Grass	Unknown
OSB-108	3" Below Grass Line	Grass	Unknown
OSB-109	3" Below Grass Line	Grass	Unknown
OSB-110	3" Below Surface	Soil	Unknown
OSB-111	3" Below Grass Line	Grass	Unknown
OSB-112	3" Below Surface	Soil	Unknown
OSB-113	4" Below Grass Line	Grass	Unknown
OSB-114	1" Below Surface	Soil	Unknown
OSB-115	No Ash Present	Grass	NA
OSB-116	No Ash Present	Grass	NA
OSB-117	No Ash Present	Grass	NA
OSB-118	3" Below Grass Line	Grass	Unknown
OSB-119	4" Below Grass Line	Grass	Unknown
OSB-120	8" Below Grass Line	Grass	Unknown
OSB-121	2" Below Grass Line	Grass	Unknown
OSB-122	2" Below Grass Line	Grass	Unknown
OSB-123	3" Below Grass Line	Grass	Unknown
OSB-124	3" Below Grass Line	Grass	Unknown

Table 1

**Off-Site Soil Borings  
Brown's Dump  
January 29, 30, 31 and February 1 and 2, 1996**

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Soil Boring Designation	Depth to Ash (inches)	Cover	Thickness of Ash (inches)
OSB-125	3" Below Grass Line	Grass	Unknown
OSB-126	4" Below Grass Line	Grass	Approximately 3"
OSB-127	No Ash Present	Grass	NA
OSB-128	No Ash Present	Grass	NA
OSB-129	6" Below Grass Line	Grass	Approximately 3"
OSB-130	No Ash Present	Grass	NA
OSB-131	No Ash Present	Grass	NA
OSB-132	6" Below Grass Line	Grass	Approximately 1"
OSB-133	No Ash Present	Grass	NA
OSB-134	No Ash Present	Grass	NA
OSB-135	No Ash Present	Grass	NA
OSB-136	No Ash Present	Grass	NA
OSB-137	No Ash Present	Grass	NA
OSB-138	6" Below Grass Line	Grass	Approximately 4"
OSB-139	3" Below Grass Line	Grass	Unknown
OSB-140	No Ash Present	Grass	NA
OSB-141	No Ash Present	Grass	NA
OSB-142	No Ash Present	Grass	NA
OSB-143	No Ash Present	Grass	NA
OSB-144	No Ash Present	Grass	NA
OSB-145	No Ash Present	Grass	NA
OSB-146	No Ash Present	Grass	NA
OSB-147	No Ash Present	Grass	NA
OSB-148	No Ash Present	Grass	NA
OSB-149	6" Below Grass Line	Grass	Approximately 2'
OSB-150	No Ash Present	Grass	NA
OSB-151	No Ash Present	Grass	NA
OSB-152	No Ash Present	Grass	NA
OSB-153	No Ash Present	Grass	NA
OSB-154	No Ash Present	Grass	NA
OSB-155	No Ash Present	Grass	NA
OSB-156	Glass and Ash at Surface	Soil	Approximately 2"
OSB-157	No Ash Present	Grass	NA
OSB-158	No Ash Present	Grass	NA

Table 1

**Off-Site Soil Borings  
Brown's Dump  
January 29, 30, 31 and February 1 and 2, 1996**

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Soil Boring Designation	Depth to Ash (inches)	Cover	Thickness of Ash (inches)
OSB-159	No Ash Present	Grass	NA
OSB-160	No Ash Present	Grass	NA
OSB-161	3" Below Grass Line	Grass	Approximately 4"
OSB-162	No Ash Present	Grass	NA
OSB-163	No Ash Present	Grass	NA
OSB-164	No Ash Present	Grass	NA
OSB-165	4" Below Grass Line	Grass	Approximately 2"
OSB-166	No Ash Present	Grass	NA
OSB-167	4" Below Grass Line	Grass	Approximately 2"
OSB-168	8" Below Surface	Soil	Approximately 2"
OSB-169	24" Below Grass Line	Grass	Approximately 6"
OSB-170	No Ash Present	Grass	NA
OSB-171	No Ash Present	Soil	NA
OSB-172	No Ash Present	Soil	NA
OSB-173	No Ash Present	Soil	NA
OSB-174	No Ash Present	Soil	NA
OSB-175	No Ash Present	Soil	NA
OSB-176	No Ash Present	Grass	NA
OSB-177	No Ash Present	Grass	NA
OSB-178	No Ash Present	Soil	NA
OSB-179	No Ash Present	Grass	NA
OSB-180	18" Below Soil	Soil	Approximately 6"-8"
OSB-181	No Ash Present	Grass	NA
OSB-182	12" Below Grass Line	Grass	Unknown
OSB-183	No Ash Present	Grass	NA
OSB-184	No Ash Present	Grass	NA
OSB-185	No Ash Present	Grass	NA
OSB-186	No Ash Present	Grass	NA
OSB-187	No Ash Present	Grass	NA
OSB-188	No Ash Present	Grass	NA
OSB-189	3" Below Grass Line	Grass	Unknown
OSB-190	No Ash Present	Grass	NA
OSB-191	No Ash Present	Grass	NA
OSB-192	3" Below Grass Line	Grass	Unknown

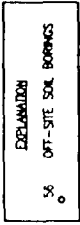
Table 1

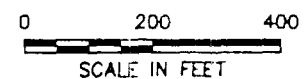
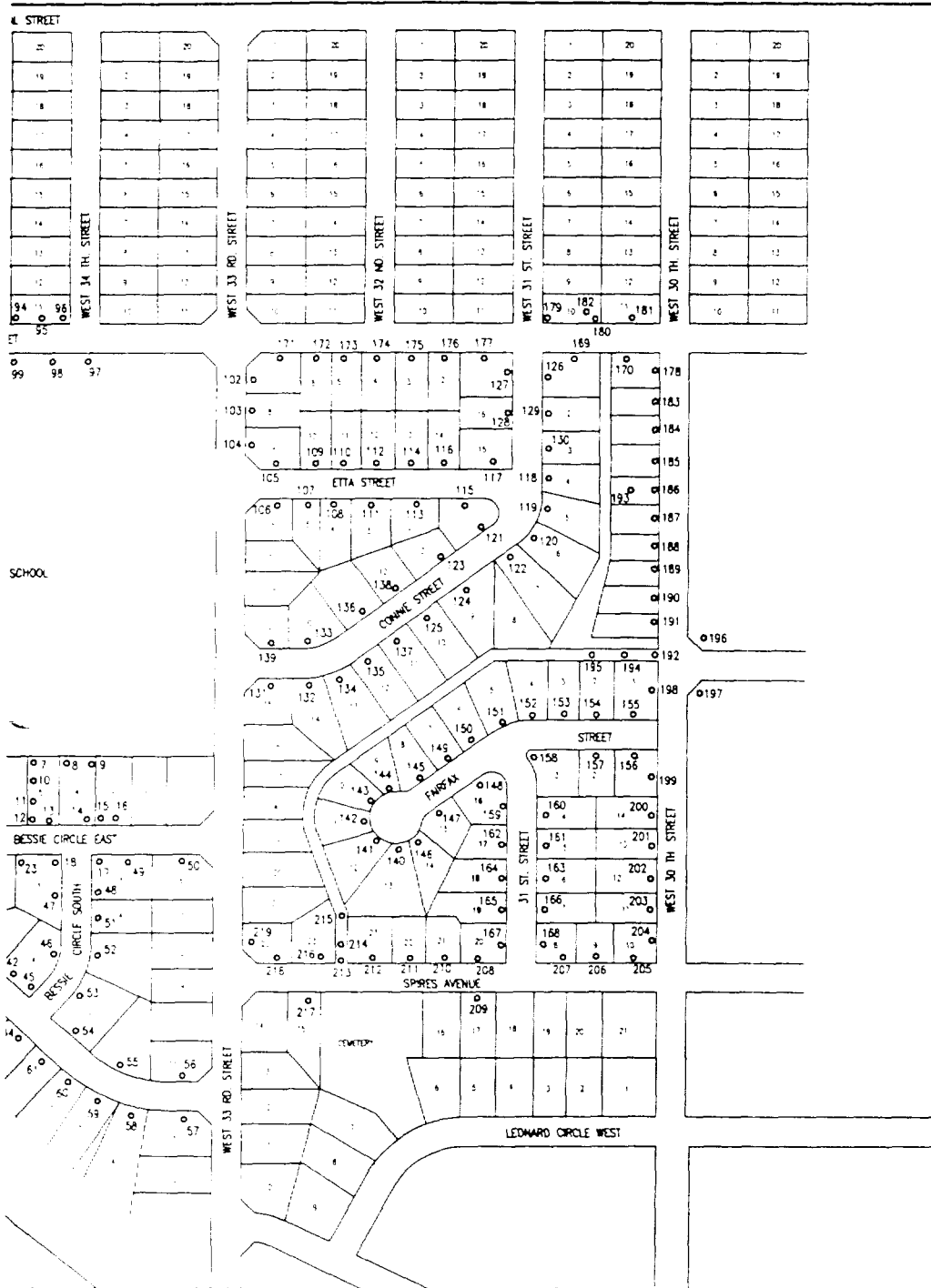
**Off-Site Soil Borings  
Brown's Dump  
January 29, 30, 31 and February 1 and 2, 1996**

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Soil Boring Designation	Depth to Ash (inches)	Cover	Thickness of Ash (inches)
OSB-193	6" Below Grass Line	Grass	Unknown
OSB-194	3" Below Grass Line	Grass	Unknown
OSB-195	5" Below Grass Line	Grass	Unknown
OSB-196	No Ash Present	Grass	NA
OSB-197	No Ash Present	Grass	NA
OSB-198	No Ash Present	Grass	NA
OSB-199	No Ash Present	Grass	NA
OSB-200	No Ash Present	Grass	NA
OSB-201	No Ash Present	Grass	NA
OSB-202	No Ash Present	Soil	NA
OSB-203	No Ash Present	Soil	NA
OSB-204	No Ash Present	Soil	NA
OSB-205	No Ash Present	Grass	NA
OSB-206	No Ash Present	Grass	NA
OSB-207	No Ash Present	Grass	NA
OSB-208	4" Below Grass Line	Grass	Approximately 4"
OSB-209	No Ash Present	Grass	NA
OSB-210	No Ash Present	Grass	NA
OSB-211	No Ash Present	Grass	NA
OSB-212	6" Below Surface	Soil	Unknown
OSB-213	12" Below Surface	Soil	Approximately 8"
OSB-214	12" Below Surface	Soil	Unknown
OSB-215	12" Below Surface	Soil	Unknown
OSB-216	12" Below Grass Line	Grass	Unknown
OSB-217	8" Below Grass Line	Grass	Approximately 10"
OSB-218	No Ash Present	Grass	NA
OSB-219	No Ash Present	Grass	NA

NOTE: NA = not applicable.

NAME: 4\DWG\135\022\001.DWG DATE: FEB 10, 1996 TIME: 11:50 AM



MARY MCLEOD BETHUNE ELEMENTARY  
SCHOOL / BROWN'S DUMP  
4330 PEARCE STREET  
JACKSONVILLE, FLORIDA

OFF-SITE SOIL BORINGS

FIGURE

1

PROJECT NO.

71286.001.090